SWAC20-29 Series

Application

Industrial control and remote DC power supply systems, switching systems, A/D and D/A, railway communications, communication interface converters, cellular telephones, semiconductor lasers, display screens, monitors Control equipment, petrochemical, portable instrument, medical instrument, automatic control device, anti-theft alarm, handheld instrument, digital circuit, IC card meter, air conditioning computer controller, etc.

Product description

SWAC20-29 series is the latest series developed by our company Line products in ultra-small volume packages. This product has an ultra-wide input voltage of 165~510VAC, the volume is 72*50*25mm, and has the characteristics of high efficiency and low power consumption. The product meets the requirements of green environmental protection, and has the function of overcurrent and short circuit protection.

Feature

◎ Wide input range
◎ Efficiency typical value is greater than 80%
◎ Wide operating temperature range: industrial -25℃ ~ +85℃, military -40℃ ~ +85℃
◎ Isolation voltage 2500VAC
◎ International standard pin mode
◎ Metal shell flame-retardant package
◎ Comply with RoHS directive
◎ Heat dissipation mode: natural cooling
◎ Good shielding anti-interference performance and electromagnetic compatibility, output overcurrent, short circuit protection,
Overheat protection, self-recovery and other functions

SWAC20-29 Series

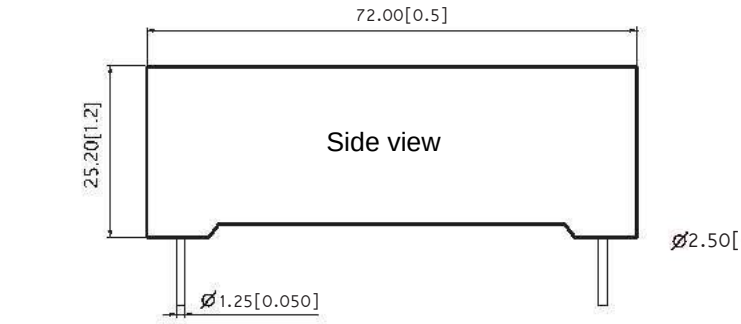
Part No	Input voltage (V)	Output voltage (V±2%)	Full load output Current (mA)	Efficiency ±3%	Weiht(g)	Encapsulation	Conform
SWAC20-29S3.3	165-510VAC (200-700VDC)	3.3	6060	≥77%	37	DIP	ROHS
SWAC20-29D3.3		±3.3	±3030	≥77%	37	DIP	
SWAC20-29S05		5	4000	≥77%	37	DIP	
SWAC20-29D05		±5	±2000	≥77%	37	DIP	
SWAC20-29S09		9	2222	≥78%	37	DIP	
SWAC20-29D09		±9	±1111	≥78%	37	DIP	
SWAC20-29S12		12	1666	≥78%	37	DIP	

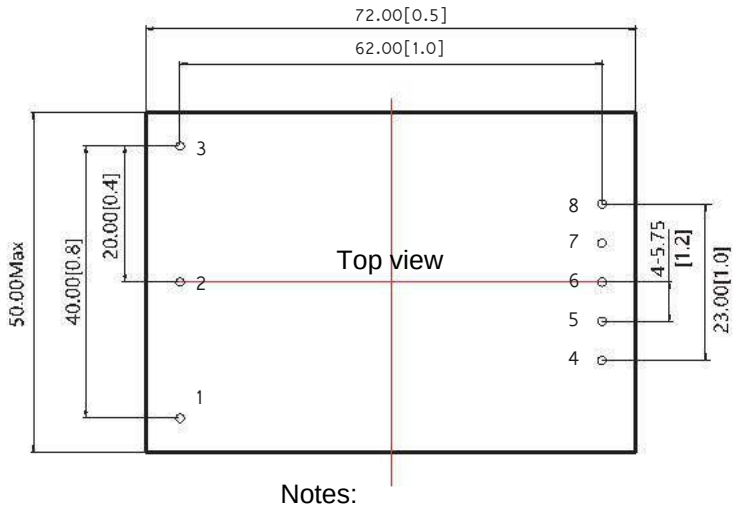
SWAC20-29D12	165-510VAC (200-700VDC)	±12		±833		≥79%	37	DIP	ROHS
SWAC20-29S15		15		1333		≥81%	37	DIP	
SWAC20-29D15		±15		±666		≥81%	37	DIP	
SWAC20-29S24		24		833		≥80%	37	DIP	
SWAC20-29D24		±24		±416		≥80%	37	DIP	
SWAC20-29S48		48		416		≥80%	37	DIP	
SWAC20-29D48		±48		±208		≥80%	37	DIP	
SWAC20-29TD0505	165-510VAC (200-700VDC)	5(±2%)	5(±5%)	2000	2000	≥78%	37	DIP	
SWAC20-29TD0512		5(±2%)	12(±5%)	2000	833	≥78%	37	DIP	
SWAC20-29TD0515		5(±2%)	15(±5%)	2000	666	≥78%	37	DIP	
SWAC20-29TD0524		5(±2%)	24(±5%)	2000	416	≥80%	37	DIP	
SWAC20-29TD1205		12(±2%)	5(±5%)	1000	1600	≥80%	37	DIP	
SWAC20-29TD1212		12(±2%)	12(±5%)	833	833	≥80%	37	DIP	
SWAC20-29TD1224		12(±2%)	24(±5%)	833	416	≥80%	37	DIP	
SWAC20-29TD2405		24(±2%)	5(±5%)	750	400	≥80%	37	DIP	
SWAC20-29TD2412		24(±2%)	12(±5%)	500	666	≥76%	37	DIP	
SWAC20-29M051212	165-510VAC (200-700VDC)	+5(±2%)	-12(±5%)	+12(±5%)	+2000	+416	-416	≥80%	37	DIP	
SWAC20-29M051212		+5(±2%)	-12(±5%)	+12(±5%)	+1600	-500	+500	≥80%	37	DIP	
SWAC20-29M051212		+5(±2%)	-12(±5%)	+12(±5%)	+1200	-583	+583	≥80%	37	DIP	
SWAC20-29M051515		+5(±2%)	-15(±5%)	+15(±5%)	+2000	-333	+333	≥80%	37	DIP	
SWAC20-29M241215		+24(±2%)	-12(±5%)	+15(±5%)	+500	-333	+266	≥80%	37	DIP	

Electrical characteristics					
Parameters	Unit	Condition Vi ,-25℃≤Tc≤85℃	limiting value		Unit
			Min	Max	
Output voltage	Vo	full-load	Vo-2%	Vo+2%	V
Max Output Current	Iomax	–	–	Po/Vo	A
Output ripple voltage	Vp-p	full-load Vi，BW=20MHz Ordinary temperature	–	≤V0±2%	mV
Voltage regulation rate	Sv	Vimin、Vi、Vimax full-load	–	2.00	%
Load Regulation rate	Si	Vi，Io=(0%~100%)Iomax	–	1.00	%
Efficiency	η	Vi full-load Ordinary temperature	80.00	–	%
Insulation resistance	RI	Vin- / Vout G @2500ACV t≥3S	50	–	MΩ

General characteristics		
EMC	Magnetic susceptibility experimentation Electrostatic discharge experimentation Radiated Susceptibility experimentation Conducted susceptibility experimentation	GB6833.2-87 GB6833.3-87 GB6833.5-87 GB6833.6-87
Temperature drift	0.02%/℃	
Frequency	47HZ~63HZ （MAX）	
Humidity	95% （max）	
Leakage current	–	
MTBF	>2,000,000 Hour	

Markings and Dimensions

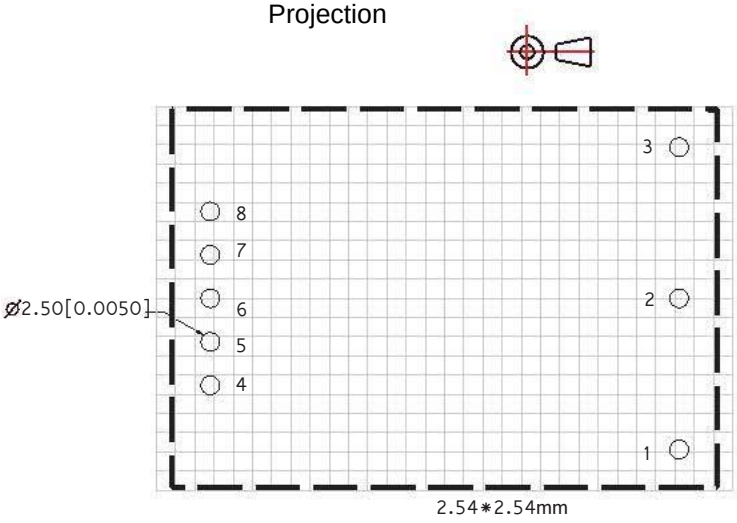




Notes:

1. Unit : mm (inch)
2. Terminal diameter tolerance: ±0.1 (±0.004)
3. No tolerance marked: ±0.5 (±0.020)

Projection

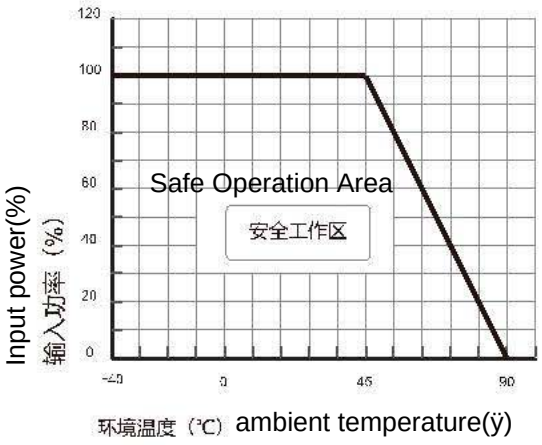


Pin Definition				
Pin	(1)	(2)	(3)	(4)
1	L(+)	L(+)	L(+)	L(+)
2	N(-)	N(-)	N(-)	N(-)
3	FG	FG	FG	FG
4	+XXVDC	+XXVDC3	+XXVDC	+XXVDC2
5	/	COM	/	0V2
6	COM	-XXVDC1	/	/
7	/	+XXVDC1	/	+XXVDC1
8	-XXVDC	0V1	0V	0V1

Notes: XXVDC Output voltage XX V

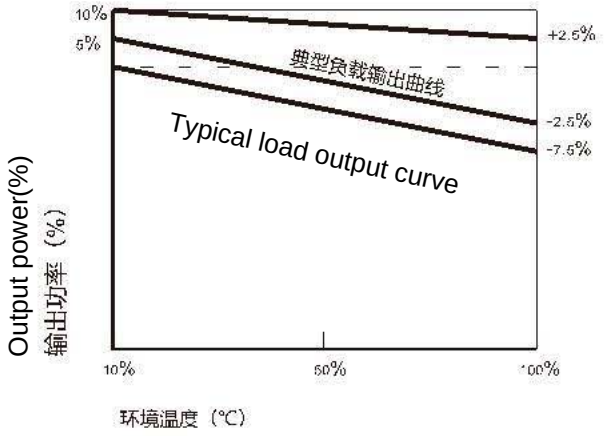
Temperature profile

Typical efficiency chart



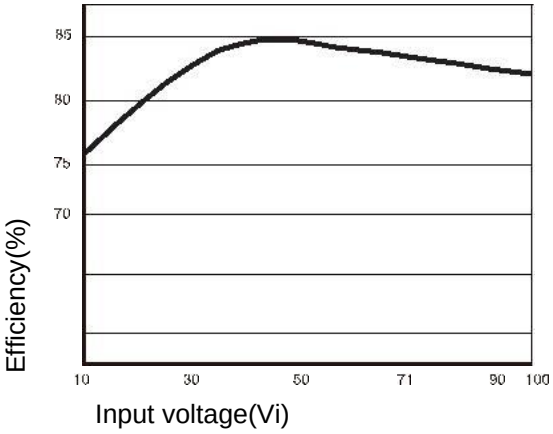
温度曲线图

Error envelope curve

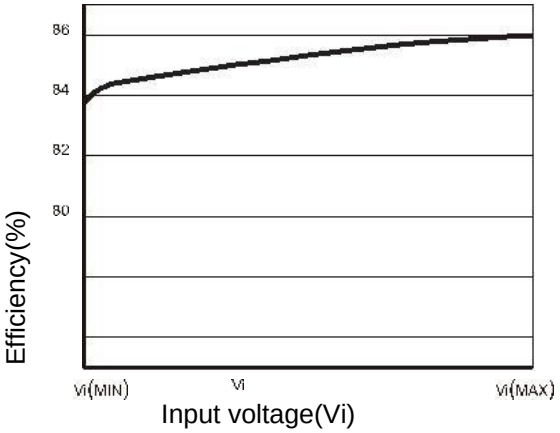


误差包络曲线图

Typical efficiency curve

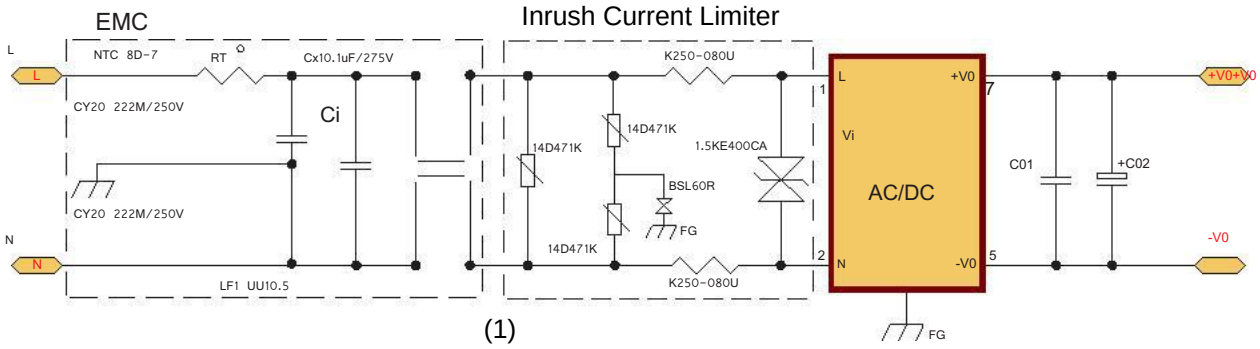


Efficiency/Load curve

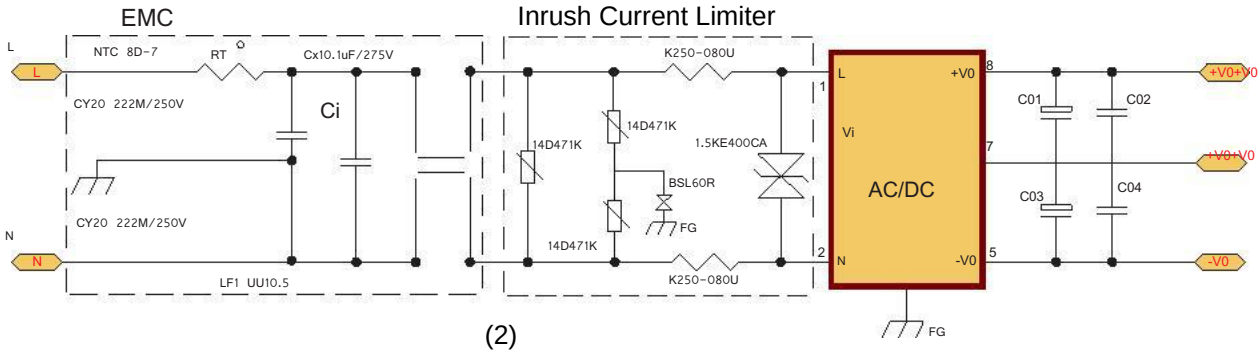


Efficiency/Input voltage

Typical application circuit

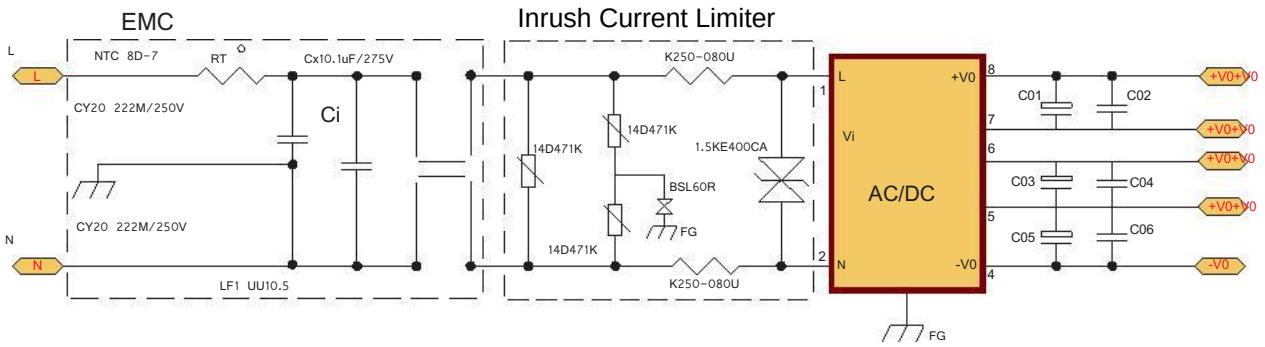


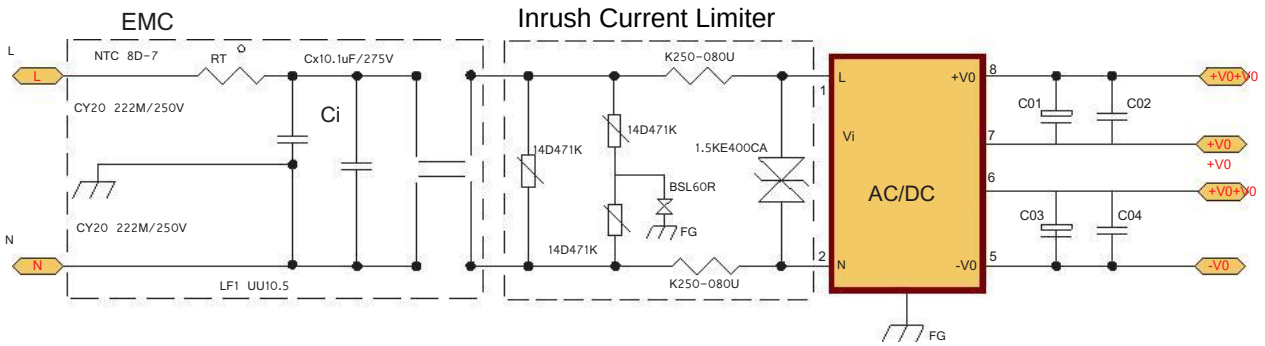
(1)



(2)

Typical application circuit





Input Device Recommendation

Vo(VDC)	Co1	Co2
2～5	104M 50V	2200uF/10V
5～15	104M 50V	1000uF/16V
15～24	104M 50V	470uF/25V
24～48	104M 50V	220uF/63V

Output Device Recommendation

Pout(W)	RT	Fuse(A)	Ci(uF)	Ri(KΩ)	LF(mH)
0.1~3	8D-7	0.2~0.4	0.1/275	560	8~10
3~10	8D-7	0.4~0.6	0.1/275	560	8~10
10~20	8D-7	0.6~0.8	0.1/275	560	8~10
20~30	8D-7	0.8~1.0	0.22/275	560	8~10
30~40	8D-7	1.0~1.2	0.22/275	560	8~10